

Claims

- [c1] A hydrocarbon fluid containment article comprising a wall and a coating system on the wall, the coating system comprising an outermost layer of platinum and a ceramic barrier layer between the outermost layer and the wall.
- [c2] The hydrocarbon fluid containment article according to claim 1, wherein the outermost layer has a thickness of about 150 to about 200 nm.
- [c3] The hydrocarbon fluid containment article according to claim 1, wherein the barrier layer has a thickness of about 500 to about 1500 nm.
- [c4] The hydrocarbon fluid containment article according to claim 1, wherein the barrier layer is formed of at least one ceramic material chosen from the group consisting of silica, alumina, tantala, hafnia, yttria, and chemical combinations of silica with boron and/or phosphorous and/or alumina.
- [c5] The hydrocarbon fluid containment article according to claim 1, wherein the outermost layer contacts a hydrocarbon fluid at a temperature of about 105 ° C to about 345 ° C.
- [c6] An article having a wall contacting a hydrocarbon fluid at a temperature of about 105 ° C to about 345 ° C, the article comprising a coating system on the wall that inhibits the formation and adhesion of carbonaceous deposits on the wall, the coating system comprising an outermost layer of platinum and a ceramic barrier layer between the outermost layer and the wall, the outermost layer having a thickness of about 150 to about 500 nm, the barrier layer having a thickness of about 500 to about 1500 nm, the barrier layer being formed of at least one ceramic material chosen from the group consisting of silica and alumina.
- [c7] The article according to claim 6, wherein the outermost layer has a thickness of about 150 to about 200 nm.
- [c8] e article according to claim 6, wherein the barrier layer has a thickness of about 700 to about 1300 nm.

- [c19] The method according to claim 14, wherein the outermost layer has a thickness of about 150 to about 200 nm and the barrier layer has a thickness of about 700 to about 1300 nm.
- [c20] The method according to claim 14, wherein the article is a gas turbine engine component.